TB 43-180

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION AND REPAIR REQUIREMENTS FOR THE MAINTENANCE OF ARMY MATERIEL

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HEADQUARTERS, DEPARTMENT OF THE ARMY

15 SEPTEMBER 2002

This is a complete revision of TB 43-180 to reflect the policies and procedures for calibration and repair responsibilities as set forth in AR 750-43 and TB 750-25.

*TB 43-180

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REPORTING OF ERRORS

You can help improve this publication by calling attention to errors and by recommending improvements and stating your reasons for the recommendations. Your letter or DA Form 2028, Recommended Changes to Publications, should be mailed directly to Commander, U. S. Army Aviation and Missile Command, ATTN: AMSAM-TMD-LP, Redstone Arsenal, AL 35898-5000. FAX to DSN 788-2313 (commercial 256-842-2313). A reply will be furnished directly to you.

*This bulletin supersedes TB 43-180, 15 May 2002.

1. Purpose. This technical bulletin (TB) lists the calibration and repair support (C&RS) requirements for test, measurement, and diagnostic equipment (TMDE) and calibration standards used in the support of equipment used by the fielded Army. The inspection/calibration of small arms and ammunition gages (SAAG) is also contained in this bulletin. TMDE not listed in this publication will not be supported by U. S. Army TMDE support units until identified to the U. S. Army Test, Measurement, and Diagnostic Equipment Activity (USATA) in accordance with (IAW) the provisions of AR 750-43.

2. Scope. This TB is applicable to all U. S. Army units, organizations, installations, activities, and commands which are responsible for the maintenance of the fielded Army equipment; schools and training centers; and Army National Guard (ARNG) and U. S. Army Reserve (USAR) units.

3. Identification of Requirements for TMDE not Listed in this TB. DA Form 3758R, Calibration and Repair Requirements Worksheet (CRRW) will be submitted by TMDE owners/users when the C&RS requirements of their TMDE are not listed in this TB. Requirements for the item should be considered the same as those requirements specified for like or equivalent items until a reply to the DA Form 3758R has been received or until the item appears in this TB. Instructions for preparation of DA Form 3758R are listed in TB 750-25.

4. General

a. This TB contains an appendix which is an alphanumeric listing of all known fielded Army TMDE (including SAAG) calibration and/or repair requirements and is sequenced by manufacturer's model, Joint Electronics Type Designator System (JETDS) (formerly JAN), nomenclature, Army part number (APN), specification, or range. Certain requirements, such as those listed under a military (MIL) specification, are listed as "ALL NSN."

b. Changes to data elements as required for DA Form 7372 (TMDE Calibration and Repair Data) will be updated IAW TB 750-25 upon receipt, or on an individual basis as items become due for calibration. To prevent disruption of established schedules and disagreement between equipment records, an item normally will be scheduled and calibrated based on the interval specified at the time of the last calibration. At the time of next calibration, all records, to include DA Label 80 (U. S. Army Calibrated Instrument) or DA Label 163 (U. S. Army Limited or Special Calibration), must be annotated to depict the interval specified in this TB. Items changing from calibration not required (CNR) to a calibration status will be scheduled for calibration as soon as feasible after receipt of this TB. Refer to TB 750-25 for forms preparation and data reporting instructions.

NOTE

Calibration must be requested and performed anytime within the authorized interval when the user suspects that the TMDE is out of tolerance.

c. TMDE users will use this TB to identify TMDE requiring cyclic calibration or repair support.

d. ARNG/USAR units will ensure that their TMDE is calibrated IAW the following guidance:

(1) National Guard Combined State Maintenance Shops (CSMS) assigned TMDE support missions by the National Guard Bureau (NGB) will be responsible for calibration and repair of all Army National Guard TMDE designated for support as (F) level in this TB. Each CSMS will also be responsible for supporting those items designated as (T) level support when the CSMS has been authorized the TMDE support capability in accordance with AR 750-43.

NOTE

Calibration standards utilized by the CSMS, which are also a part of the AN/GSM-286 and AN/GSM-287 calibration standards sets (system codes U11 and U12), will be calibrated at the level indicated in the appendix for system code U11 and/or U12.

(2) TMDE support requirements and intervals for ARNG or USAR equipment used in a formal classroom environment will be determined IAW AR 750-43.

(3) Individual ARNG or USAR TMDE items not currently in use may be placed in administrative storage, providing the readiness posture of the affected unit is not degraded.

e. Equipment located in Research and Development (R&D), Procurement and Production (P&P), Test and Evaluation (T&E) installations, the U. S. Army Primary Standards Laboratory (USAPSL), the U. S. Army Corps of Engineers, and depot maintenance activities is not specifically identified in this TB. The commanders of Army elements having these activities should establish individual TMDE support requirements and intervals based on equipment applications IAW AR 750-43.

f. Calibration intervals listed for support at the primary level are for initial calibration and guidance only. The actual interval for each item calibrated by the USAPSL will be as annotated on the DA Label 80 applied to the item of equipment. The interval may vary depending upon the historical performance of each serial numbered item. Intervals for items contained in the APSL exchange package are 420 days.

5. Explanation of Columnar Headings

NOTE

Major data fields in which the entry has been changed (since the last revision to the TB) will be preceded by an asterisk (*).

a. Model Number

(1) This is the model number assigned by the manufacturer (drawing number for SAAG), the JETDS designation, APN, or specification number, etc., depending on how the item is identified by the commodity manager.

NOTE

When the space provided does not permit the listing of all items of TMDE in a set or kit for a given model number, the entry for the item is repeated as many times as necessary in order that all components are listed.

(2) A line for remarks is shown directly under the model number. This line is used to further identify the item with such things as substitute part numbers, manufacturer's drawing numbers, etc.

b. Item Name (Abbreviated Nomenclature)

(1) Item names have been abbreviated into 12 spaces in this TB to conform to requirements of DA Form 7372. Abbreviations from AR 310-50 and MIL-STD-12D are used where possible. Paragraph **11** contains abbreviations used in this TB.

(2) A line for remarks is shown directly under the item name. This line is used to further describe the item, show the commercial equivalent, or as an extension of the item name.

c. CAGE Code

(1) This is a 5-digit code which identifies the manufacturer of the instrument listed. Codes used are IAW FEDLOG.

(2) The manufacturer's name has been placed on the line below the CAGE code to simplify recognition.

d. National Stock Number (NSN)

(1) The NSN is listed to assist in identification and data reporting. Effort has been made to ensure accuracy of this number, but the AMDF should be consulted for requisitioning purposes.

(2) The part number or other identification is placed on the line below the NSN for additional reference.

e. Type Equipment. This column is used to identify special purpose TMDE by the use of the abbreviation SP. The absence of an entry in this column indicates the TMDE is a general purpose (GP) item.

f. Calibration Responsibility Column. This column identifies the type calibration facility responsible for calibration support of the TMDE. When calibration cannot be accomplished by the calibration facility identified, or if higher-level support is required to maintain traceability, the next higher calibration support level will be utilized. The entries used in this column are described below.

(1) The letter F identifies those TMDE-SP items which are to be supported by item owner or intermediate direct support/general support (DS/GS) units.

(2) The letter T identifies those items of TMDE which are to be supported by the Area TMDE Support Team (ATST) or TMDE Support Center (TSC). In accordance with paragraph 4d(1), ARNG may support items identified as T level.

(3) The letters F/T identify those select TMDE-GP items which are normally supported by the D/S, G/S, and Aviation Intermediate Maintenance (AVIM) units; but, when the capability does not exist, the support will be provided by the ATST.

(4) The letter S identifies those items of TMDE which are to be supported by the Army Calibration Laboratory (ACL) or by the closest support activity that has the appropriate (S) level support capability.

(5) The letters S/F identify those select TMDE-GP items which are normally the responsibility of the ACL, but in special cases where the capability exists, may be supported by item owner or DS/GS unit; for example, propeller protractors and ASTM thermometers.

(6) The letters T/S indicate support responsibility of the ACL, ATST, or TSC.

(7) The letter P indicates support responsibility is assigned to the USAPSL or by the closest support activity that has the appropriate (P) level support capability.

(8) The letters P/S indicate support responsibility to be the USAPSL or the ACL as specified in paragraph **6** of this TB.

(9) Individual items of automated test equipment (ATE), listed as F level herein, will be calibrated using system software (when that capability exists) by the ATE operator-maintainer during cyclic calibration of other TMDE in the ATE. A DA Label 80 or DA Label 163 will be affixed IAW TB 750-25 listing the calibration interval contained herein and a DA Form 7372 submitted. Checks, verifications, and associated adjustments not affecting calibration of the individual items of ATE accomplished between cyclic calibration of the system do not constitute a calibration. New DA Labels 80 or 163 will not be affixed, and DA Form 7372 will not be submitted. A calibration will be performed by the responsible maintenance activity subsequent to any repair of the individual items of ATE, a new DA Label 80 or 163 affixed, and a DA Form 7372 submitted.

(10) The letters N/A indicate test sets, tool kits, measurement systems, etc., that do not require calibration as an assemblage and are listed for information only. However, individual components contained within sets, kits, systems, etc., do require calibration. DA Form 7372 will not be submitted for the assemblage (items identified as N/A), but will be submitted for each component to be calibrated.

(11) TMDE requiring calibration as a set will be on the same interval, or an incremental interval (at no time will the incremental interval exceed the TB 43-180 interval listed), based on the shortest assigned interval of items in the set (i.e., oscilloscope mainframe and associated plug-ins).

g. Calibration Procedure

(1) This column identifies the procedures to be used for calibration support of the TMDE. Air Force and Navy procedures listed may be obtained IAW AR 25-36. Navy publication requirements will be submitted on DD Form 1348M (DOD Single Line Item Requisitions System Document (Mechanical)), to the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120. Air Force publication requirements will be submitted on Air Force Technical Order (AFTO) Form 276 to OCMA (OCMMSUB), Tinker AFB, OK 73145. AFTO Form 276 may be obtained from OCMA (OCMMSUB), Tinker AFB, OK 73145. Calibration procedures are also contained in the Government Industry Data Exchange Program (GIDEP) data bank.

(2) When using the Core Workstation MIS-35947, Signal Generator Workstation MIS-35954, or Oscilloscope Workstation MIS-38935/1, electronic technical bulletins (ETB) will be used. ETBs will not be used for any nuclear weapons (system code H05) items when standards of higher order accuracy are required IAW TB 750-25. Appropriate ETBs have been, and will continue to be distributed to facilities utilizing these systems. Appropriate DA TB calibration procedures will be used for all other applications.

(3) ETBs are in the process of being replaced with automated and semi-automated integrated calibration environment (ICE) procedures. ICE procedures are designed to be used manually or, with appropriate IEEE/interface connections and cables, in an automated mode. ICE procedures require the installation of the ICE run time environment on certain instrument controllers. Copies of the ICE run time software and the latest publications can be obtained by contacting AMSAM-TMD-LW.

NOTE

The USATA Engineering Division has developed a software tool for use in calibrating passive microwave devices when using the Hewlett-Packard, Model 8902 measuring receiver. For more information, or to obtain a copy of this tool, contact AMSAM-TMD-LW.

(4) Procedures identified as Army Metrology Calibration Center (AMCC), U. S. Army TMDE Support Group (ATSG), or U. S. Army TMDE Support Activity (USATA) ##XXXX are limited distribution covering small quantity, limited deployed, non-type-classified equipment. These are issued only to those calibration activities with a known need for the procedures. Requests for these procedures should be justified and be addressed to Commander, U. S. Army Aviation and Missile Command, ATTN: AMSAM-TMD-LP, Redstone Arsenal, AL 35898-5000, on an as needed basis.

(5) Examples of procedures for other limited deployed items are GIDEP, Quality Assurance Calibration Procedures (QACP), Calibration Procedures (CP), etc. When a valid need for these procedures exists and procedures are not locally available, a request should be submitted to Commander, U. S. Army Aviation and Missile Command, ATTN: AMSAM-TMD-LP, Redstone Arsenal, AL 35898-5000. In addition to the procedure requested, the exact model number and physical location of the instruments being supported should be reflected in the request.

NOTE

When an official calibration procedure (i.e., TB, AFTO, or NAVAIR) and a manufacturer's manual are both listed to be used when calibrating an item, the item is to be calibrated using the techniques from the official procedure and the accuracies contained in the manufacturer's manual.

(6) Publication numbers followed by the letter C in the calibration procedure subcolumns of this TB indicate classified publications. Calibration actions requiring the use of these publications must be performed only in secure areas designated by the local security officer IAW AR 380-5. The TMDE owner/user is responsible for maintaining classified publications.

(7) The procedure column is also used to identify components of those items designated N/A, where space permits.

(8) A current listing of all SAAG drawings, technical data files, and calibration procedures used to support the ammunition gage inspection and calibration program will be maintained by Red River Army Depot, and ACALA, Rock Island Arsenal, IL.

h. Repair Responsibility. This column identifies the maintenance responsibility for SP TMDE with either an F (DS/GS/AVIM) or T (ATST or TSC). GP TMDE is the responsibility of the USATA. An entry will not appear in this column for GP TMDE to enable the SP items to be highly visible.

i. Maintenance Manual. This column identifies applicable maintenance manuals. When no specific manual is identified, the manufacturer's manual may be used. The GIDEP data bank may be utilized to obtain maintenance manuals, as appropriate. For SAAG, this column denotes information describing the usage of the gage.

j. Intervals

(1) The interval column indicates the maximum number of days that TMDE may be used before recalibration is required. USATA, in coordination with the responsible materiel developer or materiel manager, may change these intervals to improve reliability, materiel readiness, or to effect cost savings. Brevity codes are used for entries on DA Form 7372 and are provided for reference (see TB 750-25). Intervals for SAAG in the appendix indicate the maximum number of days and/or the maximum number of inspections which can be performed using the applicable gage between calibration cycles.

(2) The TMDE owner/user may request, in writing, an extension beyond the calibration void date for a limited period of time (a maximum of 10 percent of the established interval) under certain specific conditions; e.g., an item being used on an in-process test. The owner/user will submit, in writing, to the supporting organization a request for the deviation. The activity that grants the deviation must be the activity that performs calibration of that instrument. The TMDE used in areas for personnel safety will not be allowed deviation from prescribed calibration intervals. When performing calibration for other U. S. Armed Forces (i.e., U. S. Navy, U. S. Air Force, etc.) the calibration interval will be as specified by the customer.

NOTE

The number of days in the interval column is primarily for fixed calibration facilities. Mobile teams (teams that travel to customer locations on a scheduled mobile loop basis) MUST use the next lowest interval that represents the 180-day loop schedule for listed intervals of less than 1080 days when the interval listed is not 180 days or a multiple of 180 days (i.e., 360, 540, 720, 960, 1080). For example, 225 days would revert to 180 days, etc.

CODE	INTERVAL/DAYS
A	30
B	60
C	90
D	120
E	150
F	180
G	210
H	240
J	270
K	300
L	330

CODE	INTERVAL/DAYS
M	360
N	450
O	One time calbr
P	540
Q	630
R	480
S	600
T	390
U	420
V	510
W	570
X	660
Y	690
Z	840
2	720
3	1080
5	USAPSL special only
6	960
7	Training
8	CNR
9	CBU (Admin storage)

k. System Code. Three digit system codes (see paragraph **10**) have been assigned to various systems and commands to simplify data processing. Each requirement is entered into the TB 43-180 master file by using the system code of the submitting system or command. These codes identify only those system or command requirements that require a different interval, level, procedure, etc., from the normal requirements due to a unique application. The absence of a system code indicates that calibration requirements are the same for all users. The TMDE owner should refer to paragraph **10** of this TB, then select and identify to the calibration facility the code that most accurately defines the system or command that the TMDE is used to support.

6. Equipment Requiring Special Handling or Reporting

a. RADIAC Meters

(1) Specific guidance for C&RS for RADIAC meters is found in TB 9-6665-285-15.

(2) Calibration intervals for RADIAC meters are as follows:

(a) Radiographic meters (used to comply with 10 CFR 34.24) will be conspicuously marked with embossing tape with the word RADIOGRAPHIC and calibrated every 180 days.

(b) Medical meters (used to comply with 10 CFR 35.51) will be conspicuously marked with embossing tape with the word MEDICAL and calibrated every 360 days (this interval applies only if the instrument is accompanied by a dedicated check source when presented for calibration.)

(c) Instruments used for evaluation of diagnostic X-ray and dental X-ray will be conspicuously marked with embossing tape with the word X-RAY and calibrated at primary (P) level every 360 days.

(d) Active meters (those instruments used for "Health and Safety" not covered in (a) through (c) above) will be conspicuously marked with embossing tape with the word ACTIVE and calibrated with an interval of 360 days if the instrument is accompanied by a USATA approved dedicated check source when presented for calibration. If the check source is not on the USATA approved check source list, the owner/user will submit requests for initial approval of the 360-day interval through AMSAM-TMD-M to AMSAM-TMD-SR and must include the model/serial number of the instrument, serial number and isotope of check source, the activity of the check source, and a statement of protocol on the check source to be used with the instrument to ensure in-tolerance conditions are maintained. Active instruments not having a USATA approved check source will be calibrated at the intervals specified in Appendix of this TB. Active instruments not listed in the appendix of this TB will be calibrated every 180 days.

(e) Tactical (formerly contingency) meters will be calibrated every 1080 days.

(f) RADIAC meters used in the measurement of neutron radiation will be calibrated at primary (P) level. The calibration interval for neutron meters is 240 days, unless a different interval is specified in Appendix of this TB.

(g) RADIAC instruments used only in research and development applications will be conspicuously marked with embossing tape as “R&D ONLY”. The calibration interval for these items will be determined by the owner, who will state in writing, the interval assigned (based on the category of usage/license requirements) to each individual instrument. The calibration level for these instruments will be at the appropriate facility having the capability to meet the accuracy required, based on the usage of the items.

(h) Tritium air monitors will be calibrated at primary (P) level for 360 days. Secondary reference (S) level may request authorization to calibrate these instruments by submitting a memorandum to primary (P) level. Written approval will only be granted by primary (P) level to secondary reference (S) level elements that have adequate facilities, equipment, and procedures.

NOTE

Area monitors that have periodic operational checks performed by the owner/user using a dedicated check source shall be designated CNR provided a calibrated active meter is available for accurate measurements as needed. All other area monitors shall be considered as active and calibrated IAW Appendix of this TB.

(3) RADIAC meters with multiple probes which are microprocessor controlled (i.e., Eberline, Models ESP-1, ESP-2, etc.) are designed to permit the storage of a calibration factor for each individual probe in memory. Other RADIAC meters that have more than one probe can be fully calibrated for only one probe. In these cases one probe is designated the primary probe and the meter is calibrated (adjusted) using that probe. All other probes are exposed and given sensitivity or efficiency factors without making further adjustments to the meter.

(4) Radiation counting instruments (excluding RADIAC survey meters) used for wipe/leak test analysis and/or radionuclide assay are CNR. Owner/users will perform the operational checks on these instruments, including background determination and efficiency.

(5) The model DT674, detector radiation (p/o AN/PDR77 RADIAC meter) will be calibrated only when specifically requested by the user (who must justify the requirement for calibration). All other model DT674 detectors will be placed in a 'Calibrate Before Use' (CBU) status.

b. Army Dosimeters. The calibration intervals and procedures for RADIAC meters (dosimeters IM9( ), IM93 ( ), and IM147( ) are as follows: Tactical (formerly contingency) RADIAC meters (dosimeters) will be calibrated at transfer (T) level for 1080 days using TM 11-6665-227-12. Active RADIAC meters (dosimeters) will be calibrated at secondary reference (S) level using gamma or x-ray calibrators only, IAW calibration procedure ATSG 360, at the interval specified in Appendix of this TB. Active RADIAC meters (dosimeters) will not be calibrated using the AN/UDM-2 RADIAC calibrator. All RADIAC meters (dosimeters) in the range of 0 to 200 mR will be calibrated at 360-day intervals (max).

NOTE

RADIAC meters (dosimeters) IM93( )/UD and IM147( )/PD shall only be used as a tactical (formerly contingency) RADIAC meter (dosimeter). RADIAC meters (dosimeters) IM9( )/PD should not be used as a tactical (formerly contingency) RADIAC meter.

c. TMDE Requiring Additional Equipment and/or Accessories. These items of TMDE require that additional equipment and/or accessories (which are not part of the calibration standards sets) be provided before calibration and/or repair services can be performed. The material fielder (identified by the system code entry in the SYSTEMS column) for these items must provide the required equipment and/or accessories, necessary for support of his TMDE, to USATA.

d. Torque Calibration Arms. Torque calibration arms are CNR for elements/units that possess torque cells and appropriate indicators. For all other elements/units, these items will be calibrated at (S) level, using ATSG 393, with an interval of 1080 days.

e. Commissary Weights and Scales. Calibration and repair support for commissary weights and scales is limited to those Army commissaries located outside of the United Sates, U. S. territories, and possessions. The Troop Issue Subsistence Officer (TISO) is responsible for establishing calibration and repair support (C&RS) for all commissary scales within his area of operations. Guidance for C&RS is contained in AR 30-18. The AR states "The TISO will establish a program to calibrate or verify the accuracy of scales at least semiannually."

f. Personnel Weighing Scales. Scales which are used to monitor personnel in the weight control program do not require cyclic calibration. These scales will be designated as Calibration Not Required (CNR). The final evaluation to determine overweight must be made by commanders and supervisors by determining the body fat percentage IAW AR 600-9. The actual weight of the soldier can be verified at the medical facility where properly calibrated scales are available. Owners of these items must comply with appendix B of TB 750-25 to register their requirements. The system code to be used in Block 22 of DA Form 3758R is B∅∅. USATA will provide repair support for personnel weighing scales, except for Medical Department Activity (MEDDAC) facilities.

g. Postal Scales

(1) All TMDE, including postal scales, authorized to Army postal organizations by MTOE, TDA, or other Army authorization documents are the support responsibility of the USATA. These items of TMDE will be listed in this TB and calibration and repair support will be provided under the guidance applicable to all Army general purpose TMDE. This policy excludes those postal scales leased to Army postal organizations and calibrated/repaired under the lease agreement.

(2) The support of TMDE used in postal facilities operated by the U. S. Postal Services is not the responsibility of the USATA. The USATA will support this TMDE only on a reimbursable basis under a negotiated support agreement.

h. Dimensional Gages (other than small arms and ammunition gages (SAAG)). Inspection and calibration of these gages will be IAW the following:

(1) Inspection and calibration of dimensional gages such as ring, plug, and thread gages used in Army industrial facilities or in depot overhaul or rebuild missions (excluding SAAG) should be identified in the applicable Depot Maintenance Work Request (DMWR). (See AR 750-1 and MIL-M-63041C.) When the inspection and calibration requirements for these gages are not specified in the DMWR, they will be inspected and calibrated using the gage drawing and, when applicable, MIL-STD-116, 116B, 117, 117B, 120, or other standard. Inspection and calibration intervals on gages not specified in DMWRs or official requirements lists will be established by using depot or facility predicated on the degree of usage.

(2) All gages will be entered in the owner's/user's master record file (IMRF). The gages will be reported to USATA via DA Form 7372. The owners/users will contact their local TMDE support activity (TSA) for instructions on where to send their gages for inspection and/or calibration.

(3) Listings of drawings, technical data files, and calibration procedures used to support the inspection and calibration of gages will be maintained by the activity that performs the calibration. Calibration of gages accomplished in-house will be reported to the local TSA.

(4) Gages that have been sealed in industrial grade air-dry plastic coating do not require recalibration on their calibration expiration date if the plastic coating has not been damaged or removed. However, careful inspection of thread gages for damage is required. If the plastic coating is intact and no damage has occurred to the gage the owner/user will notify the supporting TMDE activity to update the gage calibration. The DA Form 7372 will be processed to reflect the new due date with the following entry in the remarks block "Plastic coating has not been removed or damaged." The supporting activity will provide the owner/user with a DA Label 80 (when applicable) reflecting the new calibration expiration date. If a gage record card is used in lieu of a DA Label 80 then this card will be annotated with the new date and initialed by a responsible individual from both the using and supporting activity.

i. Torque Wrenches, Calipers, and Micrometers

(1) Torque wrenches, calipers, micrometers, and other items with general federal specifications (GGG-W-686C (GSA/FSS), GGG-C-105, GGG-C-111, A-A1274, A-A2414 etc.) are listed in this TB by the federal specification in place of each individual manufacturer's model number. The listing of these specifications means that all models covered require calibration and are considered to be listed in this TB.

NOTE

Appropriate CAGE code entry must be utilized for all items.

(2) The model entry to be used on DA Form 7372 for these items will be as follows:

(a) Items that are listed in the appendix of this TB by manufacturer's model will be entered as listed on the form.

(b) Those items which are not listed in the appendix of this TB by manufacturer's model will be entered using the instrument's measurement range as the model on the form.

(3) The following are some examples of the correct method for using the measurement range as the model on the DA Form 7372:

(a) For Torque Wrenches – 5-150INLB, 100-750INLB, 0-100FTLB, 1200-4800IN, 0-600FTLB, 0-48INOZ, 100-600NM, and etc.

(b) For Outside Micrometers – 0-1IN, 2-3IN, 3-4IN, 0-25MM, and etc.

(c) For Inside Micrometers – 1.5-12IN, 2-12IN, and etc.

(d) For Calipers, Height Gages, and Depth Gages – 0-6IN, 0-3IN, 0-12IN, and etc.

(e) For Pressure Gages – 0-100PSI, 0-1000PSI, 0-75MB, 0-100INH20, 0-30INHG, and etc.

j. Petroleum, Oils, and Lubricants (POL) Meters and Differential Pressure Gages

(1) Vehicle refueling and dispensing meters are not considered TMDE. Verification of these meters, when required, will be performed by DS/GS/organizational or Director of Logistics (DOL) personnel using a calibrated prover can or a calibrated master meter. The prover can or master meter will be calibrated by an ACL or the USAPSL.

(2) A 5-gallon capacity prover can is listed in this TB as Test Measure, 5 Gal STD under model API 1101. Additional prover cans are listed under models FS 282-1D, FS 282-5D, and FS 282-10D. A DA Form 3758R should be submitted by the owner or user for any other model prover cans or master meter requiring calibration support IAW TB 750-25.

(3) Differential pressure gages used on bulk fuel storage and refueling facilities will be calibrated at (T) level using TB 9-6685-330-35 with an interval of 360 days. These gages are not specifically identified in the appendix of this TB. DA Form 7372 will be annotated for these items using the guidance provided in paragraph **i** above as an example.

k. **Welfare, Recreation, and Morale Support Activities Equipment**. TMDE used by Army Morale Support Activities (MSA), and classified as government property IAW AR 215-1, will be supported on a nonreimbursable basis. The determination of eligibility for support is the responsibility of the using MSA. For TMDE not specifically listed in this TB, the owning MSA, in coordination with the local TSA, will establish calibration requirements and intervals based on local use, using this TB as a guide.

l. Medical Diagnostic Equipment. It is the policy of the U. S. Army Surgeon General that medical diagnostic equipment used directly on the patient will not be listed in this TB. However, TMDE used in medical repair facilities is listed and will receive periodic calibration.

m. Velocity Transducers. Velocity transducers with model numbers 4-118, 4-125, and 4-128 will be calibrated at nine locations. Items in CONUS will be calibrated at TSC-Yuma, AZ; TSC-Letterkenny Chambersburg, PA; TSC-Aberdeen, MD; TSC-Corpus Christi, TX; TSC-Redstone Arsenal, AL; and TSC-White Sands, NM. Items in Europe will be calibrated by the U. S. Army TMDE Support Region-Europe, Pirmasens, Germany; and items in USARPAC and 8th U. S. Army will be calibrated by the U. S. Army TMDE Support Region - Pacific, Camp Carroll, Korea.

n. Radar Speed Guns. Radar speed guns are not considered TMDE. Verification of radar speed guns will be performed by the owner/user as required. The tuning forks used in the verification of radar speed guns will be calibrated on an annual basis (360 days) by USATA, using calibration procedure TB 9-6695-300-35.

o. Thermistor Mounts. (Thermistor mounts issued to ATSTs and TSCs)

(1) Thermistor mounts attached with Glyptol to the side arms of directional couplers used as power standards will be certified as identified for the power standard; e.g., 7916256, (P) level; 7916259, (S) level; 7916124-1, (S) level, etc.

(2) Thermistor mounts HP 478AH55 and HP 478AH75 issued to TSAs but not part of power standard sets, as well as the HP R486A and HP K486A mounts, will be supported as listed in the appendix.

(3) A maximum of two each of the HP 478A, HP 8478B, HP P486A, and HP X486A mounts issued to each ACL will be designated as standards for the calibration of power standard assemblies (7913441) and will be calibrated at primary level. Any remaining mounts will be calibrated at the secondary level, using TB 9-6625-1932-35.

(4) Thermistor mounts issued to the ATSTs and TSCs not meeting criteria of (2) above will be calibrated at their respective levels, using TB 9-6625-1932-35.

p. Power Standard Assemblies. (Power standard assemblies issued to ATSTs, p/o U06). Power standard assembly 7913995, when issued and used as a substitute for the DC1/341D-AR directional coupler contained in the 100-watt power standards set (7916256), will be certified at (P) level. In other cases, it will remain at (S) level.

q. Calibration of John Fluke 5700A( ), 5720 Meter Calibrators, 5520A/6 Oscilloscope/Meter Calibrator, and 5820A-5C-GHZ, Oscilloscope Calibrator.

(1) The John Fluke models 5700( ) and 5720 series meter calibrators require both a full calibration every 360 days and an ARTIFACT calibration every 180 days. These instruments will be calibrated as follows:

(a) A full calibration using TB 9-6695-293-50 or ETB 61000- will be performed at (S) level every 360 days. A DA Label 80 will be affixed to the instrument reflecting the due date of the next (S) level calibration (360 days). At this time a second DA Label 80 (for ARTIFACT calibration) will be affixed to the instrument reflecting a due date of 180 days. This ARTIFACT calibration was accomplished in paragraph **8** of the TB or in the ETB.

(b) The second ARTIFACT calibration (at 180 days) will be performed at (T/S) level, using the manufacturer's manual, by the owner/user of the item. The ARTIFACT DA Label 80 affixed to the instrument will be updated accordingly.

NOTE

Calibrating the 5700A to external standards is the section of the manufacturer’s manual that performs the ARTIFACT calibration.

(2) A DA Form 7372 will be prepared for each instrument as follows:

(a) One form will be prepared using the information depicted in the appendix of this TB. This form will reflect a calibration interval of (M) (360 days).

(b) A second form will be prepared reflecting a calibration interval of (F) (180 days). The model number to be used on this form will be 5700( ) or 5720( ) (do not use 5700A, 5700A/AN, 5700A/CT-03, or 5720 as the model number on this form) and the nomenclature will be ARTIFACT. This form must be updated (after the (S) level 360-day calibration) using the DATE CALBR information contained on the ARTIFACT DA Label 80 affixed to the instrument. This form will be completed by the element having responsibility for performing the second calibration.

(3) The John Fluke model 5520A/6 oscilloscope/meter calibrator requires both a full calibration every 360 days and an ARTIFACT calibration every 180 days. This instrument will be calibrated as follows:

(a) A full calibration using ETB 61001- will be performed at (S) level every 360 days, and at the same time an ARTIFACT calibration using ETB61002- will be performed. A DA Label 80 will be affixed to the instrument reflecting the due date of the next (S) level calibration (360 days). At this time a second DA Label 80 (for ARTIFACT calibration) will be affixed to the instrument reflecting a due date of 180 days.

(b) The second ARTIFACT calibration for the 5520 (at 180 days) will be performed at (S) level. The ARTIFACT DA Label 80 affixed to the instrument will be updated accordingly.

(4) A DA Form 7372 will be prepared for each instrument as follows:

(a) One form will be prepared using the information depicted in the appendix of this TB. This form will reflect a calibration interval of (M) (360 days).

(b) A second form will be prepared reflecting a calibration interval of (F) (180 days). The model number to be used on this form will be 5520( ) (do not use 5520A/6 as the model number) and the nomenclature will be ARTIFACT.

(5) The John Fluke, model 5820A-5C-GHZ Oscilloscope/Calibrator, requires both a full calibration every 360 days and an ARTIFACT calibration every 180 days. This instrument will be calibrated as follows:

(a) A full calibration using ETB 61003 will be performed at (S) level every 360 days; at the same time an ARTIFACT calibration, using ETB 61004 will be performed. A DA Label 80 will be affixed to the instrument reflecting the due date of the next (S) level calibration (360 days). At this time a second DA Label 80 (for ARTIFACT calibration) will be affixed to the instrument reflecting a due date of 180 days.

(b) The second ARTIFACT calibration for the 5820 (at 180 days) will be performed at (S) level. The ARTIFACT DA Label 80 affixed to the instrument will be updated accordingly.

(6) A DA Form 7372 will be prepared for each instrument as follows:

(a) One form will be prepared using the information depicted in the appendix of this TB. This form will reflect a calibration interval of (M) (360 days).

(b) A second form will be prepared reflecting a calibration interval of (F) (180 days). The model number to be used on this form will be 5820A-5C( ) (do not use 5820A-5C-GHZ as the model number) and the nomenclature will be ARTIFACT.

r. Bridge VSWR, Wiltron, Model 60N50. A label or tag will be affixed to this item (in addition to the DA Label 80 over printed CNR). The following will be entered on the label or tag: "This item will only be used for repair support of the AN/USM-489(V)1 Spectrum Analyzer. It will not be used as a calibration standard."

s. Flow Transfer Kit, FT-AFS-4-CF, APN MIS-10391A. This kit is equipped with two model FT-16M50-LB and two model FT-8M10-LB flowmeters. All four meters must remain with each kit. The using calibration team submits to the USAPSL a set comprised of one meter of each model number. The two sets are submitted approximately 1 year apart on an alternating schedule. This system provides the team with a continuous flow capability. Note that USAPSL delinquency status reports do not apply for those meters and that the meters may be expected to be at the USAPSL approximately 10 months before recalibration.

t. Transfer Standard, Ballantine, Model 1600A. The only component of the Ballantine 1600A which requires USAPSL support calibration/repair is the removable transfer assembly module ("attenuator head"). When the transfer assembly is due calibration and the Ballantine 1600A is operational, ship only the transfer assembly. If the 1600A is not functioning properly and the problem has been identified as a locally correctable mainframe malfunction, then local repair of the mainframe only is authorized. Otherwise, ship the entire unit less the outer case. Also, remove and retain plugs P14 and P15. P14 and P15 are located on the instrument's rear panel.

u. Electro Optics Test Set (EOTS) MIS-30860. Calibration of EOTS MIS-30860, consisting of power supply model 92, light source model 920, and radiometer model 9200, will be calibrated at (S) level with a 210-day interval. A spectral response check on the detector requires calibration of the entire EOTS utilizing MIS30860 as the model number at primary on a 630-day interval.

v. The 9918 Attenuator Set

(1) The 9918 Attenuator Sets (6695-01-111-2324), issued to the TSAs as p/o the U06 and U12 sets, include a combination of the following fixed attenuators:

(a) 9918-10DB (6695-01-109-9117) or 44-10 (5985-01-148-6464).

(b) 9918-20DB (6695-01-109-9116) or 44-20 (5985-01-231-7056).

(c) 9918-3DB (6695-01-109-9119) or 44-3 (5985-01-320-4417).

(d) 9918-30DB (6695-01-109-9115) or 44-30 (5985-01-231-7055).

(e) 9918-6DB (6695-01-109-9118) or 44-6 (5985-01-320-4419).

(f) 9918-60DB (6695-01-109-9038) or 44-60 (5985-01-278-6838).

(2) U06 identified items are supported at primary and U12 items are supported at secondary transfer. Each individual attenuator in the set should have its own DA Label 80 and calibration test report. Items will be submitted for calibration as a set, not as individual end items.

w. Digitizer Tektronix, Model 7612D. The model 7612D digitizer is calibrated at two locations, the TSC at Pirmasens, Germany, and the USAPSL, using the digitizer workstation, model 13335532 and the manufacturer's automated calibration procedure.

x. **Transfer Standard John Fluke**, **Models 732A and 732B**. The transfer standards, models 732A and 732B, issued to AC for support of the core workstation, MIS-35947, will be calibrated at (P) level. All other models 732A and 732B will be calibrated at (S) level.

y. Sound Level Meters and Acoustical Calibrators. The sound level meters and acoustical calibrators (piston phones) used in hearing conservation (noise-hazard survey) programs must be calibrated at least annually as required by DA Pam 40-501, paragraph 4-2.

z. Intermiks and Setting Rings

(1) The calibration of intermiks will be performed at the level where appropriate setting rings are available. When setting rings are not available calibration support can be obtained from TSC Anniston, TSC Rock Island, TSC Tobyhanna, or TSC Warren.

(2) Calibration support for setting rings is available from the organizations listed in paragraph **8b**.

aa. Calibration of the John Fluke, Model 80K6 High Voltage Probe

(1) The model 80K6 probe issued as part of the AN/PSM45A METR M DIGTL is a component part of this meter and will not have a separate DA Label 80 or DA Form 7372 prepared for it.

(2) This listing for the model 80K6 probe is for those probes which are not a part of the AN/PSM45A. These probes are calibrated as indicated.

bb. Pressure Gages Used on Air Compressors, Welding Regulators, and etc. These items are primarily indicating devices and should not be considered as TMDE.

cc. Calibration of Hewlett Packard 8657() and 83732() Signal Generators. The phase noise parameter of these instruments cannot be calibrated by USATA. If the owner/user requires calibration of this parameter, the instrument must be returned to the manufacturer for calibration. If the owner/user does not require calibration of this

parameter, the instrument will be calibrated at (T) level (using the manufacturer's manual) and a DA Form 163 (Limited Calibration) affixed to the item. The DA Form 163 will identify that this parameter was not calibrated.

dd. Calibration of Model 12972100 Transfer Standards Adapter. The self-check for this instrument, contained in TM 9-4931-586-30&P, must be performed prior to and after calibration. Inside this instrument there are two items which must be removed for calibration. The two items are a Model AN/USM-459B, Frequency Counter, which must be calibrated using ETB 50023-, and a Hewlett-Packard, Model 34401A, Digital Multimeter, which must be calibrated using TB 9-6625-2315-35. The instructions for removing and installing these items are contained in TM 9-4931-586-30&P. These two items will not receive a DA Label 80 and will not be entered in the calibration recall system. The model 12972100 transfer standards adapter will have a DA label affixed to it and will be entered into the calibration recall system.

ee. Calibration of Unique End Items. Unique end items submitted by nonfield Army elements to USATA calibration personnel shall not be considered for calibration unless accompanied by the host system. Individual circuit, pc, VXI . . . cards WILL NOT BE CONSIDERED FOR STAND-ALONE CALIBRATION.

ff. Calibration of Hewlett-Packard 8757E Network Analyzer

(1) The Hewlett-Packard model 8757E network analyzer requires both a full calibration every 360 days and an ARTIFACT calibration every 1080 days. The detectors used with the 8757E (which are designated CNR (calibration not required)) **MUST** accompany the instrument when presented for calibration at both (S) and (T) levels.

(2) This instrument will be calibrated as follows:

(a) An ARTIFACT calibration using ETB 04007- will be performed at (S) level every 1080 days. A DA label will be affixed reflecting the due date of the next ARTIFACT calibration (1080 days). After completing the ARTIFACT calibration, a full calibration, using NA17-20GQ-81, will be performed at (S) level (to ensure proper system operation) and a DA Label 80 affixed reflecting a due date of 360 days.

NOTE

ETB-04007 contains an "OP-CHECK" test to verify the performance of the Hewlett-Packard 11613B against a calibrated Hewlett-Packard 3458A DMM during the ARTIFACT calibration of the Hewlett-Packard 8757E. If the Hewlett-Packard 11613B fails the "OP-CHECK," it must be returned to the manufacturer for repair.

(b) The second and third full calibrations, using NA17-20GQ-81, will be performed at (T) level. The DA Label 80, affixed to the instrument reflecting the 360-day due date, will be updated accordingly.

(3) A DA Form 7372 will be prepared for each instrument as follows:

(a) One form will be prepared which will reflect a calibration support of (S) and a calibration interval of (3), 1080 days. The model number to be used on this form is **8757(E)** and the nomenclature used will be **ARTIFACT**. All calibration man hours expended at (S) level will be reported on this form.

(b) A second form will be prepared which will reflect calibration support of (T) and a calibration interval of (M), 360 days. This form will be prepared using the information contained in the appendix of this TB.

(4) When the instrument is returned from (S) level, after an ARTIFACT and full calibration, the DA Form 7372 depicting (T) level calibration support will be updated using the DATE CALBR information contained on the 360-day calibration interval DA Label 80 (affixed by (S) level). No calibration man-hours will be reported on the form for this action.

gg. Wipe Tests. The lead proponent for Chemical Agent Monitors (CAM) (including 416-301, 442-301, and 442-021), the Improved Chemical Agent Monitor (ICAM), and support of the M8A1/M43A1 is the Radiation Safety Officer at the U. S. Army Soldier, Biological, and Chemical Command (SBCCOM). These items are not considered TMDE. Army Regulation 710-3 provides policy and procedural guidelines for performing and reporting wipe tests. This regulation allows Army calibration teams to serve as a secondary source of field support in event that the primary support structure is not available. At installations having heavy concentration of soldiers, the preferred source of CAM support is from the MOS 35F personnel assigned to Direct Support Units, using the Department of Defense (DoD) Radiation Testing and Tracking System (RATTS). Where the preferred support is not available, the U. S. Army TMDE Activity and the Combined State Maintenance Shops within the Army National Guard (ARNG) are authorized to use the TMDE recall system and to provide alternate support for customers with CAM materiel. All serial-numbered wipe-tested materiel must be reported to the DoD RATTS system. DA Label 80 will not be used to record wipe tests for referenced items. USATA and ARNG calibration teams will comply with interval and labeling requirements provided in the appropriate technical manuals/bulletins for specific CAM items. When USATA calibration activities perform the "WIPE TEST" for chemical agent monitor/detector units for Army-in-the-field activities (including USANG and USAR), system code H10 will be used.

hh. **Primary Calibration of Torque and Load Cells**. When these items are calibrated at primary level, with data stored into a removable EEPROM, calibration interval will be 420 days.

7. Small Arms and Ammunition Gages. Guidance for the inspection/calibration of these items is contained in TB 750-25.

NOTE

System code J01 will be used on DA Form 7372 for all small arms and ammunition gages.

8. Small Arms and Ammunition Gage Support Activities

NOTE

Owners/users should contact their local TMDE Support Activity for assistance prior to shipping small arms and ammunition gages to any activity listed in **a** and **b** below unless the activity has previously certified the gage(s) to be shipped. The rationale for this is not all activities have the same capabilities and/or technical data files, drawings, and calibration procedures available.

a. The following activities provide support for small arms gages:

(1) U. S. Army TMDE Support Center - Red River
ATTN: AMSAM-TMD-C-RR
Red River Army Depot
Texarkana, TX 75507-5000

(2) U. S. Army TMDE Support Center - Anniston
ATTN: AMSAM-TMD-B-A
Anniston Army Depot
Anniston, AL 36201-5095

(3) U. S. Army TMDE Support Center - Rock Island
ATTN: AMSAM-TMD-B-LRI
Rock Island, IL 61299-7430

(4) U. S. Army Area TMDE Support Center - Japan
ATTN: AMSAM-TMD-P-J
Unit #45008
APO AP 96338-5008

(5) U. S. Army TMDE Support Region-Europe
ATTN: AMSAM-TMD-E
CMR 434
APO AE 09138

(6) U. S. Army TMDE Support Center - Warren
ATTN: AMSAM-TMD-A-W
Tank-Automotive and Armaments Command
North Ave, USATACOM
Warren, MI 48397-5000

(7) U. S. Army TMDE Support Center - Tobyhanna
ATTN: AMSAM-TMD-A-T
11 Hap Arnold Boulevard
Tobyhanna, PA 18466-5104

b. The following activities provide support for ammunition gages:

(1) U. S. Army TMDE Support Center - Red River
ATTN: AMSAM-TMD-C-RR
Red River Army Depot
Texarkana, TX 75507-5000

(2) U. S. Army TMDE Support Center - Anniston
ATTN: AMSAM-TMD-B-A
Anniston Army Depot
Anniston, AL 36201-5095

(3) U. S. Army TMDE Support Center -McAlester
ATTN: AMSAM-TMD-C-AL
McAlester Army Ammunition Plant
McAlester, OK 74501-9002

(4) U. S. Army TMDE Support Center - Warren
ATTN: AMSAM-TMD-A-W
Tank-Automotive and Armaments Command
North Ave, USATACOM
Warren, MI 48397-5000

(5) U. S. Army Area TMDE Support Center - Japan
ATTN: AMSAM-TMD-P-J
Unit #45008
APO AP 96338-5008

(6) U. S. Army TMDE Support Region-Europe
ATTN: AMSAM-TMD-E
CMR 434
APO AE 09138

9. References

a. **AR 750-43**. Maintenance of Supplies and Equipment: Army Test, Measurement, and Diagnostic Equipment (TMDE).

b. **TB 750-25**. Maintenance of Supplies and Equipment: Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support Program.

10. System Codes. The system code listing in this TB is for the purpose of requirements identification. When new systems are deployed, a system code will be assigned by the USATA, as required. Current codes assigned are listed below:

NOTE

When a system code is assigned to a specific system only the equipment embedded in or used to maintain the system will be reported under the assigned code. Troop support items issued to and/or used by the owners/users will not be reported under the system's assigned code. These items will be reported under the appropriate code/codes assigned the item manager.

CODE	SYSTEM OR MAJOR END ITEM
A00	USA AVIATION AND MISSILE COMMAND MISSILE PECULIAR GENERAL
A18	HAWK DEPOT
A19	TRMF
A25	PATRIOT DEPOT
A39	AIR-TO-AIR STINGER (ATLAS)
A44	AVENGER (FORMERLY PMS)
A52	TOW
A53	TOW DEPOT REBUILD
A54	DRAGON
A55	DRAGON DEPOT REBUILD
A56	LINE OF SIGHT FORWARD HEAVY (LOS-F-H)
A57	FAAR
A59	CHAPARRAL DEPOT REBUILD
A61	MQM33C
A65	AN/GSM-340(V) IFTE
A66	AN/USM-632(V) IFTE
A71	LCSS DEPOT REBUILD
A72	FAAR DEPOT REBUILD
A77	STINGER
A78	STINGER DEPOT REBUILD
A80	PATRIOT
A81	PATRIOT (GETS1000A)
A85	TOW/COBRA
A86	TOW/COBRA DEPOT REBUILD
A91	MATE
A92	GROUND LASER LOCATOR DESIGNATOR (GLLD)
A94	HELLFIRE
A96	MULTIPLE LAUNCH ROCKET SYSTEM
A97	ARMY TACTICAL MISSILE SYSTEM (ATACMS)
A98	TOW/BRADLEY
A99	ARMY UNMANNED AERIAL VEHICLE (AUAV)
B00	GENERAL TMDE (NOT SPECIFIC TO AN END ITEM, SYSTEM, COMMODITY, OR MAJOR COMMAND)
B05	U. S. ARMY DEVELOPMENTAL TEST COMMAND (DTC)(FORMERLY TECOM)
B15	U. S. ARMY RESEARCH LABORATORY COMMAND (ARL)
B18	U. S. FORESTRY SERVICE

CODE	SYSTEM OR MAJOR END ITEM
B20	FEDERAL EMERGENCY MGT AGENCY (FEMA)
B25	KWAJALEIN ISLAND (RANGE COMMAND FUNCTIONS/MAINTENANCE)
B31	DOD NATIONAL SECURITY AGENCY
B32	DOD INTELLIGENCE AGENCY
B35	DOD MAPPING AGENCY
B40	DEPARTMENT OF TRANSPORTATION
B45	ARMY POST OFFICE (APO)
B46	ARMY RECREATION SERVICE
B50	ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE (AFRRI)
B60	R&D ACTIVITIES
B62	U. S. ARMY SPECIAL OPERATION FORCES NON-STANDARD SPECIAL PURPOSE TMDE
B65	U. S. COAST GUARD
B70	WHITE HOUSE COMMUNICATIONS AGENCY
B75	FAA
B80	DEFENSE LOGISTICS AGENCY
B90	USAMA WEST POINT
B95	CECOM R&D
C00	USA COMMUNICATIONS ELECTRONICS COMMAND, GENERAL
C10	METEOROLOGICAL
C15	TOOLS SETS, KITS & OUTFITS (MECHANICAL-PHYSICAL)
C30	AN/USM-410( ) AND AN/MSM105
C31	MULTI-SERVICE COMM SYS
C44	AN/USD-9( )
C65	MOBILE SUBSCRIBER EQUIPMENT (MSE)
C95	CECOM GAGE PROGRAM
C96	PATEC40 (PORTABLE AUTOMATIC TEST EQUIPMENT CALIBRATOR)
C97	AN/GSM 322(V)2
C98	AN/GSM 401(V)
D02	OGDEN DEFENSE DEPOT
D05	BLUE GRASS ARMY DEPOT
D10	LETTERKENNY ARMY DEPOT
D15	TOBYHANNA ARMY DEPOT
D20	SAVANNAH ARMY DEPOT
D25	RED RIVER ARMY DEPOT
D30	ANNISTON ARMY DEPOT
D55	SIERRA ARMY DEPOT
D60	RESERVE STORAGE ACTIVITY (AERAS-B-EOCS EYGEISHOVEN)
D65	CORPUS CHRISTI ARMY DEPOT
E00	USA TANK-AUTOMOTIVE COMMAND GENERAL
E25	TACOM R&D
F00	USA COMMUNICATIONS ELECTRONICS INTELLIGENCE ACTIVITY - GENERAL
F05	USA CECOM INTELLIGENCE MATERIEL MANAGEMENT CENTER
G00	USA TROOP SUPPORT COMMAND
G10	LARGE TUG
G25	MILITARY FREE-FALL SYSTEM

CODE	SYSTEM OR MAJOR END ITEM
H00	USA ARMAMENT MUNITIONS AND CHEMICAL COMMAND
H05	USA ARMAMENT MUNITONS AND CHEMICAL COMMAND NUCLEAR WEAPONS
H10	USA ARMAMENT MUNITIONS AND CHEMICAL COMMAND BIOLOGICAL RADIOLOGICAL
H15	USA ARMAMENT MUNITONS AND CHEMICAL COMMAND AMMUNITION TEST EQUIPMENT
H20	USA ARMAMENT MUNITIONS AND CHEMICAL COMMAND EOD
H25	USA ARMAMENT MUNITONS AND CHEMICAL COMMAND PECULIAR EQUIPMENT
H29	PICATINNY ARSENAL R&D
H50	WATERVLIET ARSENAL
H75	U. S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
J00	USA ARMAMENT MUNITONS AND CHEMICAL COMMAND GENERAL
J01	SMALL ARMS AND AMMUNITION GAGES (SAAG)
J05	COBRA (WEAPONS SYSTEMS)
J10	M-1 (WEAPONS SYSTEMS)
J30	CAMDS
J40	PIVADS
J50	MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES)
L00	USA AVIATION AND MISSILE COMMAND AVIATION PECULIAR GENERAL
L15	AH-S
L40	UH1
L47	CH47D
L58	OH58D
L60	UH60A
L64	AH64A
L80	SOAR
L90	AVIATION SUPPORT (CONTRACTOR)
N00	USA INFORMATION SYSTEM COMMAND GENERAL
P00	USA SATELLITE COMMUNICATION AGENCY GENERAL
P04	AN/TSC-54
P20	AN/TSC-85 & AN/TSC-93
P30	DOCS (AN/FSC-96 & AN/GSC-51)
Q00	USA COMPUTER SYSTEMS COMMAND GENERAL
R00	USA CORPS OF ENGINEERS
S00	USA MEDICAL DEPARTMENT, GENERAL
S05	USA CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE (CHPPM)
S10	SURGEON GENERAL R&D
S95	VA MEDICAL FACILITIES
T00	USA INTELLIGENCE & SECURITY COMMAND, GENERAL
T01	USA INTELLIGENCE & SECURITY COMMAND FETTS 160 (TEMPEST VANS)
T02	USA INTELLIGENCE & SECURITY COMMAND TEST LABORATORY
T10	AN/MSQ 121 (TEMPEST VANS)
T20	USA NATIONAL GROUND INTELLIGENCE CENTER
U01	USAPSL STANDARDS

CODE	SYSTEM OR MAJOR END ITEM
U04	SECONDARY REFERENCE STANDARDS DC & LOW FREQUENCY
U05	SECONDARY REFERENCE STANDARDS PHYSICAL
U06	SECONDARY REFERENCE STANDARDS, MICROWAVE
U10	TSC CALIBRATION STANDARDS NON-SET CONFIGURATION
U11	SECONDARY TRANSFER STANDARDS AN/GSM 286
U12	SECONDARY TRANSFER STANDARDS AN/GSM 287
U13	LIMITED DEPLOYED CALIBRATION STANDARDS
U14	SECONDARY TRANSFER STANDARDS AN/GSM-421
U20	GENERAL INTERNAL CALIBRATION INSTRUMENTS (CONTRACTOR OPERATED KWAJALEIN ISLAND)
U50	GENERAL INTERNAL CALIBRATION INSTRUMENTS (CONTRACTOR OPERATED RADFORD ARMY AMMUNITION PLANT)
U80	RADIAC INSTRUMENT-RADIO-GRAPHIC
U81	RADIAC INSTRUMENT-MEDICAL
U82	RADIAC INSTRUMENT-ACTIVE
U84	RADIAC INSTRUMENT TACTICAL (FORMERLY CONTINGENCY)
U85	RADIAC CALIBRATION STANDARDS/INSTRUMENTS
U86	RADIAC INSTRUMENT - DIAGNOSTIC X-RAY
U90	GENERAL CALIBRATION INSTRUMENTS – ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE (AFRRRI)
U95	CECOM GAGE LAB TYAD
V00	USA RESERVE, GENERAL (DA FORM 3758 USE ONLY)
W00	USA NATIONAL GUARD, GENERAL (DA FORM 3758 USE ONLY)
W05	USA NATIONAL GUARD CALIBRATION SET
W10	USA NATIONAL GUARD AVIATION CLASSIFICATION REPAIR ACTIVITY DEPOT (AVCRAD)
W15	USA NATIONAL GUARD M1 TANK ENGINE SPECIAL REPAIR ACTIVITY
X00	U. S. NAVY
Y00	U. S. AIR FORCE
Z00	FMS

11. Common Abbreviations

Abbreviation	Full Meaning	Abbreviation	Full Meaning
A			
A	Ampere	AC	Alternating Current
ACFT	Aircraft	AF	Audio Frequency
AGT	Agent	ALIGN	Alignment
ALT	Altimeter	ALT	Altitude
AMMO	Ammunition	AMPLIFR	Amplifier
ANALYZR	Analyzer	AND	Aneroid
ANT	Antenna	APU	Auxiliary Power Unit
ASSY	Assembly	ATTENUATR	Attenuator
AUD	Audio	AUX	Auxiliary
AZ	Azimuth	- - -	- - -

Abbreviation	Full Meaning	Abbreviation	Full Meaning
		B	
B-P	Bandpass	BAL	Balance
BB	Base Band	BLK	Block
BOT	Bottom	BR	Breakdown
BRSIT	Boresight	BTRY	Battery
		C	
C-I-R	Capacitance, Inductance, Rs	C-R	Capacitance and Resistance
CABL	Cable	CAL	Caliber
CALBR	Calibrator	CALBR	Calibration
CAPACITR	Capacitor	CAV	Cavity
CBU	Calibrate Before Using	CDE	Code
CHEM	Chemical	CHGR	Charger
CKT	Circuit	CL	Candle
CMPTR	Computer	CNL	Channel
COAX	Coaxial	COMB	Combustion
COMM	Communication	COMP	Compression
COMPARTR	Comparator	CONN	Connecting
CONT	Control	CONVRTR	Converter
COUNTR	Counter	CPLR	Coupler
CS	Case	CTG	Cartridge
CYL	Cylinder	- - -	- - -
		D	
DB	Decibel	DC	Direct Current
DEC	Decade	DET	Detonate
DETECTR	Detector	DIA	Diameter
DIF	Differential	DIGTL	Digital
DIR	Directional	DIST	Distributor
DIVIDR	Divider	DMY	Dummy
DOP	Doppler	DSPLY	Display
DT	Dual Trace	DWL	Dwell
DWT	Dead Weight	DYNMTR	Dynamometer
		E	
ELECT	Electronic	ELEMNT	Element
ENG	Engine	EQUIP	Equipment
		F	
F	Fiber	F-R	Fast Rise
F-W	Flutter Wow	FAC	Facility
FAX	Facsimile	FDR	Finder
FIG	Figure	FIX	Fixture
FLD	Field	FLT	Flight
FO	Fiber Optic	FM	Frequency Modulation
FREQ	Frequency	FUNC	Function
FWD	Forward	FX	Fixed
FZ	Fuze	- - -	- - -

Abbreviation	Full Meaning	Abbreviation	Full Meaning
		G	
GEN	Generator	GM	Guided Missile
GND	Ground	GP	General Purpose
		H	
H-P	High Pass	HD	Head
HE	High Explosion	HF	High Frequency
HV	High Voltage	HYD	Hydraulic
HYGRO	Hygrometer	- - -	- - -
		I	
IAW	In Accordance With	IC	Integrated Circuit
ID	Inside Diameter	IF	Intermediate Frequency
IGN	Ignition	ILLUM	Illumination
IMPED	Impedance	IN	Inch
IND	Indicator	INJ	Injection
INSTR	Instrument	INSUL	Insulation
INT	Intensity	IR	Infrared
		K	
KW	Kilowatt	- - -	- - -
		L	
L-C	Inductance-Capacitance	L-P	Low Pass
LD	Load	LEV	Level
LF	Low Frequency	LG	Length
		M	
M	Milli	MA	Milliampere
MACH	Machine	MAG	Magnetic
MAG	Magnet	MAINT	Maintenance
MAN	Manual	MAX	Maximum
MEAS	Measuring	MEAS	Measure
MER	Mercury	METR	Meter
MG	Machine Gun	MIN	Minimum
MIX	Mixer	MKR	Marker
MM	Millimeter	MOD	Modulation
MON	Monitor	MORT	Mortar
MOT	Motor	MSL	Missile
MT	Mount	MV	Millivolt
MW	Milliwatt	MWAVE	Microwave
		N	
NAV	Navigation	NB	Narrow Band
NOS	Noise	NTWK	Network
		O	
O	Optical	OD	Outside Diameter
ORG	Organizational	OS	Outside
OSCILATR	Oscillator	OXY	Oxygen

Abbreviation	Full Meaning	Abbreviation	Full Meaning
		P	
P/O	Part Of	PA	Power Amplifier
PAN	Panoramic	PCS	Pieces
PERF	Performance	PHAS	Phase
PHOTO	Photographic	PI	Plug In
PNL	Panel	POP	Poppet
POS	Position	POWR	Power
PRESS	Pressure	PRGMR	Programmer
PROG	Program	PROP	Propeller
PROT	Protective	PS	Power Supply
PUL	Pulse	PYRO	Pyrometer
		Q	
QTY	Quantity	- - -	- - -
		R	
RADN	Radiation	RECEIVR	Receiver
RDR	Radar	REF	Reference
REGLATR	Regulator	RESIS	Resistance
RESISTR	Resistor	RESL	Resolver
REV	Revision	RF	Radio Frequency
RI	Radio Interference	RND	Round
ROT	Rotation	- - -	- - -
		S	
SCREWDR	Screwdriver	SEL	Selective
SEL	Selector	SHOU	Shoulder
SIG	Signal	SIG	Signature
SIM	Simulator	SM	Small
SNSR	Sensor	SPD	Speed
SPEC	Spectrum	SPR	Spring
STAB	Stabilize	STD	Standard
STG	Stage	SUR	Surface
SURV	Survey	SV	Surveillance
SW	Switch	SWP	Sweep
SWR	Standing Wave Ratio	SYS	System
		T	
T-B	Time Base	T-D	Time Delay
T-I	Time Interval	T-M	Time Mark
TACH	Tachometer	TEMP	Temperature
TER	Terminal	TFORMER	Transformer
TGT	Target	THD	Thread
THEO	Theodolite	THERM	Thermal
TK	Tool Kit	TOL	Tolerance
TORQ	Torque	TRANS	Transmission
TRANSPDR	Transponder	TS	Test Set

Abbreviation	Full Meaning	Abbreviation	Full Meaning
T (Continued)			
TSA	TMDE Support Activity	TST	Test
TSTA	Test Station	TSTD	Test Stand
TSTNG	Testing	TSTR	Tester
TTY	Teletype	TURB	Turbine
U			
U/W	Used With	UNIV	Universal
V			
V	Volt	VAC	Vacuum
VAPR	Vapor	VEC	Vector
VEL	Velocity	VERT	Vertical
VHF	Very High Frequency	VIBR	Vibration
VID	Video	VIS	Visual
VLF	Very Low Frequency	VM	Voltmeter
VR	Variable	VR	Variable Range
W			
W/	With	W/O	Without
WB	Wide Band	WF	Wave Form
WG	Wave Guide	WHL	Wheel
WPN	Weapon	WHEAT	Wheatstone
X			
XDUCER	Transducer	XFR	Transfer
XMT	Transmit	XMTR	Transmitter
XTAL	Crystal	- - -	- - -

12. **Manufacturer's Name to Code and Code to Name**. For a complete list of name to code and code to name, refer to FEDLOG.

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